



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,663	10/31/2001	Yoon Shik Hong	2598/0J952	2438

7590

11/06/2002

DARBY & DARBY P.C.  
805 Third Avenue  
New York, NY 10022

EXAMINER

DOAN, JENNIFER

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/002,663

Applicant(s)

HONG ET AL.

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings, filed on October 31, 2001, are accepted by examiner.

### *Specification*

3. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Aksyuk et al. (U.S. Patent 5,923,798).

Regarding claims 1 and 2, Aksyuk et al. disclose, Figs. 1, 6 and 7, a path-converted variable optical attenuator comprising a transmitting fiber (12) for launching an optical signal through a transmitting core (13); a receiving fiber (14) for receiving the optical signal from the transmitting fiber (12) through a receiving core (15); and a mirror (8) having a reflector for obstructing the optical signal launched from the transmitting core (13) of the transmitting fiber (12) from proceeding into the receiving core (15) of the receiving fiber (14), and being displaced in a direction allowing a portion of the optical signal of the transmitting fiber (12) into the receiving fiber (14) to attenuate the optical signal (column 3, lines 1-32 and column 7, lines 1-37); wherein the mirror (8) is linearly displaced in a direction perpendicular to an optical path between the transmitting fiber (12) and the receiving fiber (14) as shown in Figs. 1, 6 and 7.

Regarding claims 3 and 4, Aksyuk et al. disclose, Fig. 1, a path-converted variable optical attenuator further comprising a substrate (16) arranged parallel to the transmitting fiber (12), the receiving fiber (14) and the mirror (8); and an MEMS actuator (4a) for controlling the mirror to be linearly displaced in a direction perpendicular to the optical path between the transmitting fiber (12) and the receiving fiber (14).

Regarding claim 5, Aksyuk et al. disclose, Fig. 9b, a path-converted variable optical attenuator comprising a plurality of transmitting fibers, a plurality of receiving fibers, a plurality of mirrors having a reflector and a semiconductor wafer arranged parallel to the plurality of transmitting fibers, the plurality of receiving fibers and the plurality of mirrors (column 8, lines 10-40).

**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aksyuk et al. (U.S. Patent 5,943,454) disclose an optical bypass exchange switch. Duelli et al. (U.S. Patent 6,388,359) disclose an actuating MEMS switch. And Lee et al. (U.S. Patent 6,459,845) disclose an optical attenuator.

7. Any inquiry concerning the merits of this communication should be directed to Examiner Jennifer Doan whose telephone number is (703) 308-6179. The examiner can normally be reached on Monday to Thursday from 6:30am to 4:00pm, first Friday off.

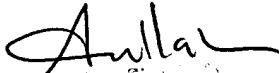
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick, can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JD

JD

October 31, 2002

  
Anil  
Principal Examiner